AIR FORCE MATERIEL COMMAND

LEADING EDGE

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Air Force Materiel Command:
Transforming to deliver P.R.I.D.E. to the warfighter

"Transformation is not a downsizing drill. It is a way of thinking and reacting in new ways. It is a means to inject radical improvements in the way we do business. It is about freeing talented people to use innovative ideas every day in working their programs."

— General Lester Lyles

LEADING EDGE

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AFMC
AIR FORCE MATERIEL COMMAND

Cover stories

Photo concept by Capt. Mark App, AFMC Plans and Programs. Cover design by Ms. Libby VanHook, AFMC Public Affairs.

4 — 18 AFMC: Transforming to deliver P.R.I.D.E. to the warfighter

As the Air Force transforms its operational concepts to meet 21st century demands, change is building momentum. Changes are being made not only in air and space capabilities, but also in how the Air Force thinks about war, requiring transformation of the Air Force culture, training and doctrine. In the Air Force Materiel Command, transformation is all about its people — using innovation and communicating with the warfighter to provide the right product, in the right place and at the right time. Turn the page to learn how AMFC is transforming in the right direction.

Mission Progress

Features

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It's not as bad as it looks...read about it on page 23.

Raptor completes guided supersonic missile launch

EDWARDS AIR FORCE BASE, Calif. — F/A-22 Combined Test Force experts here recently demonstrated the aircraft's ability to employ the advanced medium range air to air missile at high speed against a high altitude, high speed target.

Flying Raptor 4007 in its first supersonic guided missile launch, F/A-22 test pilot Maj. Jim Dutton launched an AIM-120 AMRAAM from 35,000 feet while supercruising without afterburners at 1.5 Mach or a little more than 1,000 mph. A rocket drone traveling at more than 1,500 mph at 51,000 feet served as Maj. Dutton's target. The missile, which had no warhead, flew within lethal range of the target and, from preliminary data analysis, was assessed a kill.

The rocket drone was launched from a manned F-4 aircraft that took off from Point Mugu Naval Air Station in southern California. Maj. Dutton launched the missile over the Pacific Missile Test Range that runs from Point Mugu northward along the central California coastline.

According to F/A-22 flight test engineer and test conductor Maj. Jim Colebank, all of the mission objectives were met with the Raptor successfully passing data-link parameters to the AIM-120 allowing the missile to guide within lethal range of the target.

The successful test also demonstrated criteria set forth by the Defense Department's acquisition community, which helps guide the Raptor's flight test priorities. The Defense Department criteria called for a supercruising Raptor to employ a guided AMRAAM from supersonic conditions before the end of 2002.

— Reported by AFFTC Public Affairs

Speckle and polish

EDWARDS AIR FORCE BASE, Calif. — Senior Master Sgt. Mark Bernard, chief enlisted manager for the 412th Flight Test Squadron Speckled Trout program here, polishes the C-135E Speckled Trout aircraft recently before departing on an executive airlift mission to the Pacific. The polished white-and-silver Speckled Trout is primarily for avionics flight test, but its secondary mission is to transport the Air Force's senior leaders as they conduct business around the globe.

— Reported by AFFTC Public Affairs (Photo by Tech. Sgt. Chris Ball, AFFTC Public Affairs)

Predator UAV marks 50,000 flight hours

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — The RQ-1A Predator Unmanned Aerial Vehicle program reached a major milestone recently by achieving 50,000 flight hours.

Predator was the first Defense Department advanced concept technology demonstration UAV to transition directly to active military service before achieving initial operational capability.

Since its first test flight on July 3, 1994, Predator has been involved in both non-operational and combat missions.

Based on operational results, the Predator Sustainment Office at Aeronautical Systems Center has continued to upgrade and improve the original UAV as warfighting requirements have changed over the years.

— Reported by ASC Public Affairs

Wing-warping aircraft makes first flight

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — An experimental flexible-wing jet made its maiden flight Nov. 15 from NASA's Dryden Flight Research Center, taking lighter weight, flexible winged aircraft one step closer to reality.

During an hour-long test, the modified Navy F/A-18A climbed to about 30,000 feet and flew a semi-racetrack pattern over a test range northeast of Edwards. NASA experts report the aircraft had a good first checkout flight and all test points were met.

Experts from the AFRL, Boeing's Phantom Works and NASA Dryden collaborated on the research effort called the Active Aeroelastic Wing program which is researching lighter weight flexible wings to improve high-performance military aircraft maneuverability.

The first flight followed a three-year period of modification and ground tests at the NASA facility. The test bed aircraft was modified with additional actuators, a split leading edge flap actuation system and thinner skins on a portion of the upper wing surface allowing the outer wing panels to twist up to five degrees.

— Reported by AFRL Public Affairs

AFMC takes 'inevitable' step in meeting future challenges

2nd Lt. Elizabeth Benn
AFMC Public Affairs

Change is never easy, but it is inevitable. As the Air Force transforms its operational concepts to meet 21st century demands, change is building momentum.

According to the Air Force's Transformation Flight Plan, transformation is "a process by which the military achieves and maintains asymmetric advantage through changes in operations concepts, organizational structure, and/or technologies that significantly improve warfighting capabilities or ability to meet the demands of a changing security environment."

Essentially, transformation challenges the Air Force to change rapidly and efficiently in order to preserve its advantage against evolving threats worldwide.

The most common examples of transformation are the development of new technology and the use of old technology in new ways.

However, change does not always take the form of armed unmanned aerial vehicles or F/A-22s.

A 'new' way of thinking

Senior leaders emphasize a change in the Air Force's cultural mindset, a change that ultimately enables further technological and operational revolutions. During remarks last January, Secretary of Defense Donald Rumsfeld called for "a culture of creativity and intelligent risk taking."

Maj. Gen. Daniel Leaf, director of operational requirements at Air Force headquarters, commented on the importance of cultural factors last spring as well.

"Ideas, processes and approaches can also be transformational. What is most important in transformation is a culture of innovation, a willingness on the part of commanders and subordinates to take risks and try new methods and ideas," said Gen. Leaf.

The Transformation Flight Plan states that "changes are required not only in air and space capabilities, but also in how the Air Force thinks about war, requiring transformation of our culture, training and doctrine."

Even as international threats and national interests shift, the Air Force continues to invest in its most valuable asset — its people.

A step in the right direction

Air Force Chief of Staff Gen. John Jumper's recent plan for Total Force Development, an outline for the continued professional education of Air Force personnel, is a step in this direction.

"We intend to open the aperture on what is considered beneficial education and training experience," Gen. Jumper said. By expanding training opportunities and encouraging fluency in both job-specific knowledge and Air Force doctrine, the Air Force will further empower its people to be innovators.

Number one priority

In the Air Force Materiel Command, transformation is all about people.

"It is about freeing talented people to use innovation and good ideas every day in working their programs," said Gen. Lester Lyles, AFMC commander. It is also about communicating with the warfighter to provide the right product in the right place at the right time while sustaining systems and spare parts that ensure readiness in peace, and capability in combat.

AFMC's purpose remains to enable the warfighter by developing, adapting and sustaining systems and programs in response to real-world demands. But transformation's key elements of divestiture and enterprise leadership edit long standing acquisition and sustainment processes, creating a system receptive to human innovation and common sense.

"We need to help change the culture by removing the shackles and some of the policies, some of the laws and obstructions and guidance that we have imposed on our people that actually inhibit innovation instead of allowing it," Gen. Lyles said.

Enterprise leadership is a perfect example of such paring down. Information will translate into capabilities more efficiently with the establishment of single avenues of communication, eliminating confusion between customers and systems offices.

The ultimate challenge

Transformation ultimately challenges the Air Force to condense operations under a new capability-based strategy, requiring function over legacy.

A departure from what Gen. Jumper calls the Tribal Air Force, with personnel loyal to systems and entrenched in method, transformation invites the spirit of innovation and adaptation at the heart of Air Force heritage.

The same visionary essence behind the flight at Kitty Hawk continues to work today to link dynamic future concepts of operations and business transformation initiatives with emerging technologies and creative minds.

Through the years:

A transforming command

Transformation is not new to Air Force Materiel Command. In fact, AFMC was only established in 1992 when Air Force Logistics Command and Air Force Systems Command combined.

But AFMC traces its heritage all the way back to 1917 at McCook Field, a World War I experimental engineering facility in Dayton, Ohio. With the creation of the U.S. Air Service in 1918, the organization became the Engineering Division.

By 1926, the division had expanded to include the Air Corps logistics systems and became the Air Corps Materiel Division. The Materiel Division was responsible for all aircraft and equipment research, development, procurement, maintenance, supply, and flight tests.

Research, development and logistics functions separated again during World War II, but reunited as Air Materiel Command under Gen. Arnold's leadership in the late 1940s.

In 1950, the Air Research and Development Command became a separate entity, devoted specifically to research and development. Air Materiel Command became AFLC and Air Research and Development Command became AFSC in 1961.

On July 1, 1992, AFLC and AFSC became a single, streamlined organization, built on AFLC's logistics support expertise, including maintenance, modification and overhaul of weapon systems, and AFSC's excellence in science, technology, research, development and testing.

Currently, AFMC is tackling major transformation initiatives, including depot repair enhancement, acquisition reform and competitive sourcing and privatization. But the continuing efforts of strategic leadership and a creative workforce ensure AFMC's role as an agile, effective and influential component of the 21st century U.S. Air Force.

— 2nd Lt. Elizabeth Benn, AFMC Public Affairs

AFMC commander provides transformation road map

Ms. Sarah Anne Carter
AFMC Public Affairs

Gen. Lester Lyles, Air Force Materiel Command commander, recently provided a road map for transformation that will guide AFMC to better warfighter support.

According to Gen. Lyles, transformation in AFMC is "a journey, not a destination. The world around us is changing. We have to adapt or we'll become irrelevant."

Gen. Lyles' transformation road map is centered around four expectations. **The first expectation is for AFMC to have an expeditionary mindset and culture**.

Having an expeditionary mindset means that AFMC people have to be ready to deploy. And AFMC must also understand that its job is to support the deployed forces — and that's a 24-hour, seven-day-a-week requirement. AFMC will then be ready for war at a moment's notice, Gen. Lyles said.

"You don't go to war without AFMC," said Col. Bruce Litchfield, AFMC Transformation Office deputy director. "If we had to change something to support Operation Enduring Freedom, we probably weren't doing it right."

The second expectation is for AFMC to be innovative, adaptive and responsive.

"We have to tap into the talents of the people out there," Col. Litchfield said. "We need to understand the threats and vulnerabilities to our nation and turn that into systems warfighters want, need, can afford and know will work on the battlefield."

AFMC is listening to the warfighters and is responding by creating new technology or adapting what currently exists. Innovation means looking forward and anticipating the warfighting capabilities needed in the future and focusing efforts now to develop and field those capabilities.

A third expectation is for AFMC to be easy to do business with. AFMC works with customers on a daily basis — whether they're internal customers, other major commands or headquarters Air Force.

"We need to be less programs-based and more capabilities-focused for our customers," Gen. Lyles said. "Instead of our customers saying they need a plane and going to a specific organization in AFMC, we want our customers to say they need to prevent the enemy from doing certain activities and then look to AFMC to provide those capabilities."

According to Col. Litchfield, it should be easy to call this command and get answers, but it sometimes seems that you have to be an expert on AFMC to know whom to contact. And AFMC is often so functionally or system organized, requirements or solutions aren't communicated to other functional areas. Hence, AFMC now has a new emphasis on enterprise leadership.

Mr. Doug Fleser, AFMC Transformation Office program manager, said AFMC should examine how it acts toward its customers. "We have to ask ourselves, 'Would I do business with a company that treats me this way?'"

The final transformation expectation is for AFMC to be effective and efficient.

"None of us wants to deploy with second rate systems," Mr. Fleser said. "And none of us wants to do it for more than it should cost."

The Air Force must dominate on the battlefield. AFMC needs to develop the capabilities to do that while still being good stewards of the money it has.

"We have to work within the constraints expected by the taxpayers," Col. Litchfield said. "And we're all taxpayers."

These four expectations for AFMC transformation can be applied by everyone and to every process in the command.

"It's hard for me to think of anyone in this command of 80,000 plus people who isn't involved in some way in generating air and space power for our nation," Gen. Lyles said. "Every day when you come to work you should be thinking about providing the best capabilities to the people in harm's way that have to use them.

"And if you develop that mindset and understand that every day someone has the potential to be shot at and that drives your actions — whether you're on the line at a depot, in a program office, in the laboratory or in a flight test center — these expectations should help focus your effort in delivering war-winning capability," he said.

AFMC matches future capabilities, warfighter needs

Air Force Materiel Command is meeting the warfighters' needs by looking at future capabilities and understanding where the operator is trying to take the fleet. By tapping into the latest technologies, AFMC is able to provide operators with the right solutions to meet their Air Expeditionary Force rotation and Homeland defense missions.

"It is a total team concept," said Maj. Matthew Manifold, a weapons officer in the Ohio Air National Guard'S 178th Fighter Wing. "Getting the operator involved in test and development helps to better meet the needs of the pilot. Trying new technology by flying the simulator, before buying the technology really helps. By the time a new capability gets to production it is almost exactly what we wanted."

Communication is the key

According to Col. C. D. Moore, F-16 System Program director, the process is getting better through horizontal integration; in other words, cutting down stovepipes and expecting teams to work together. "The key to horizontal integration is communication. It means not thinking of your system as a stand alone capability, but instead considering it as a system of systems."

Horizontal integration looks at how a program like an F-16 with a Joint Direct Attack Munition is going to work with the Airborne Warning and Control System or command and control systems on the ground. It looks at communication and how the system will work with intelligence and data-link systems as well as other capabilities across the battle space to include joint forces.

"AFMC has changed its mindset to one of capability-and effects-based with an Air Expeditionary Force focus. Rapid delivery of capabilities is tied to the AEF construct," said Col. Moore. The AEF plan may force trade-offs between cost, schedule, and performance. It has become the driving force behind requirements planning to get a system rapidly to the field."

The first essential step is getting the operators and the acquisition community working toward a common goal. "Instead of expecting perfection the first time a system is introduced, developers can rapidly deliver an 80-90 percent solution to meet the operator's immediate needs through the concept of shared risk," he said. According to Col. Moore, the F-16 program has been successful in doing just that.

F-16 operators expressed a need for an advanced targeting pod to achieve their precision strike mission. By using effects-based planning, developers are accelerating the capability to the field by nearly three years. Working together, operators, developers and acquisition experts determined what set of requirements could be achieved in the near term. Because of this team planning, the capability will be available next year to meet the needs of the AEF flow rather than in 2006. Another capability, and effects-based planning success for the F-16 operator involves the JDAM and wind corrected munitions dispenser capability on the aircraft operated primarily by the Air National Guard and Air Force Reserve.

The program was accelerated recently to deliver this critical combat capability in only 90 days, a challenge the F-16 team is pressing hard to meet. By working with operators, the acquisition community is better able to do things quickly and get new capabilities to the field for the next AEF rotation.

Solutions before problems

"I have been surprised," said Maj. Manifold. "At a recent meeting of weapons officers and acquisition teams, we requested a capability only to discover it had already been budgeted and ordered. AFMC is really coming through for us with this new way of doing business, it really shows at the depots with organization plans in place to complete upgrades in accordance with maintenance schedules."

AFMC is meeting the F-16 operators' needs with its sustainment programs. There are more than 3,000 F-16s from 23 different countries supported by the F-16 SPO at Ogden Air Logistics Center. Teams at Hill Air Force Base, Utah, are developing modification kits such as Falcon Up and Falcon Star to upgrade the aircraft's structure as part of a comprehensive depot maintenance plan. These programs keep the planes operating safely, prevent unplanned groundings, and increase the fleet longevity by more than 20 years.

Predictive sustainment

"Predictive Sustainment is the real answer to the sustainment challenge," said Col. Moore. "We are able to predict where a plane will have problems through a structural integrity program that monitors various control points on the aircraft. Through an acquisition plan called Falcon 2020, we are able to quickly obtain parts for the aircraft. Optimally, we don't have to wait for the aircraft to break before buying the parts. In short, predictive sustainment means proactive fleet management to meet the needs of the warfighter."

"AFMC is meeting the warfighters' needs through a strong effects-based acquisition plan, which makes available the latest in technology, and predictive sustainment. This focused effort keeps aircraft flying by rapidly obtaining parts and maintenance support before the aircraft need it," he said.

— 2nd Lt. Gailyn Whitman, AFMC Public Affairs

AFMC comes through for the warfighter by providing the latest in technology before the need arises. Here, two mission specialists provide maintenance on an AGM-86C missile. (Air Force photo by Master Sgt. Val Gempis)

AFMC enterprise leadership is foundation of Air Force Enterprise Architecture

Air Force Materiel Command's Enterprise Leadership is building the foundation of the Air Force's Enterprise Architecture plan by looking across processes and programs to find information-sharing solutions for the warfighter.

Enterprise Architecture is the Air Force Information Technology blueprint to join normally separated systems and programs to work together through a common communications process. This allows members of the requirements and acquisitions community to communicate openly with each other to find solutions to bring together their individual programs or systems.

"Enterprise Architecture is a holistic way of identifying the mission through key processes, information and technology," said Ms. Jackie Murray, AFMC Information Technology Directorate chief architect.

"Enterprise Architecture is a business map of where the Air Force wants to go with current and future information technology programs or systems. AFMC Enterprise Leadership complements Enterprise Architecture as a means to put the Air Force plan in action," she said.

Horizontal integration

Enterprise Leadership is a method to integrate the many different processes needed to acquire or sustain a system or program. Horizontal integration looks across processes and programs to identify the best combination of technologies and programs to make up an integrated solution.

Horizontal integration looks at how acquisition teams purchase technology, munitions or aircraft by developing a plan to incorporate how the new system is going to work with command and control, communication, intelligence and data-link systems as well as other capabilities across the battle space.

"Our command must move toward an expeditionary focus. We must change from a platform-centric planning and execution process to one based on the way we fight as an expeditionary air and space force," said Maj. Gen. Michael Mushala, AFMC Directorates of Requirements and Transformation director.

A case study

The Predator unmanned aerial vehicle with the Hellfire missile capability is an example of how horizontal integration provides increased capability in the expeditionary environment.

AFMC took two existing technologies and combined them to increase the warfighter's capability, and is seeking additional ways the Predator program can be integrated with other systems, such as command and control to improve warfighting effectiveness.

The program has already successfully proven itself in Operation Enduring Freedom, and will continue to increase its capabilities through this integrated approach.

According to Lt. Gen. Richard Reynolds, Aeronautical Systems Center commander, Wright-Patterson AFB, Ohio, AFMC must focus on all capabilities during the development phase of new technology, to insure full-spectrum integration with other weapons systems in our fighting forces. One of the transformational aspects of development is bringing operators in the loop faster to meet their needs earlier.

"Air Combat Command and Air Mobility Command have joined our test teams to help product development. By joining the requirements team they help speed up the weapon system development process," he said. Enterprise leaders will assess what technology is available to satisfy a capability shortfall. This process will bring together experts from the laboratories and development and support organizations to provide the warfighter integrated sets of options which can be implemented rapidly.

Providing rapid response

“The goal of Enterprise Leadership is to provide warfighters rapid response options and integrated solutions,” said Gen. Mushala. “Enterprise Leadership will provide capability-based options in response to warfighter requirements. It focuses on reduced costs, transferring technologies, improved integration, accelerated system modernization and increasing military effectiveness. In short, programs organized under Enterprise Leadership produce a greater effect than the sum of programs acting individually.”

According to Gen. Lester Lyles, AFMC commander, the vision for Air Force Enterprise Architecture is to facilitate the development of architecture products to support the Air Force's information technology investment planning.

AFMC Enterprise Leadership tools to support the enterprise construct will be developed to integrate other acquisition processes such as contracting, financial management and program management.

“These tools will help streamline acquisition and sustainment missions and provide a better integrated AFMC support plan that best meets our warfighting needs,” he said.

— 2nd Lt. Gailyn Whitman, AFMC Public Affairs

Throughout the Air Force Materiel Command logistics initiatives ensure the war fighter most effectively accomplishes the mission. (Air Force photo)

Logistics update

Loggies focus in on better warfighter support

Air Force Materiel Command logistics professionals continue to keep the warfighter at the center of their radar through headquarters and field level changes.

These pivotal changes are already providing better support to meet the continuously evolving needs of today’s warfighter.

When the war against terrorism began, Brig. Gen. Terry Gabreski, Air Force Materiel Command director of Logistics, stood up the Logistics Readiness Center, manned on a rotational basis by personnel from the logistics directorate. Now a permanent part of the LG Directorate called the Warfighter Sustainment Division, the mission of this group is to provide the AFMC “portal” for world class logistics support to the warfighter in peace and war.

They are the liaison to the warfighter to lead turn and solve logistics problems — supporting Gen Lyles’ goal of making AFMC easy to do business with.

A positive response

“Response from the field has been very positive,” said Maj. Michael Michno, director of operations, warfighter sustainment division, concerning the division’s work.

The single entry point to AFMC logistics operations including supply and maintenance allows logistics customers a one-stop-shop for their concerns rather than searching for a contact to address a specific need, he said.

In addition to resolving today’s problems, the division stood up an analysis group to prevent and address systemic problems.

Stepping up to the challenge

AFMC wing level logisticians are stepping up to the challenge of more effectively meeting their mission as they implement the Combat Wing Organization across AFMC. With the creation of the maintenance and mission support groups, the Air Force is able to focus the efforts of maintenance personnel and integrate the expeditionary efforts of the mission support group.

The merger of logistics plans, supply and transportation functions into the logistics readiness squadron is an example of this integration.

“This puts the span of control for these critical processes in one organization, reducing coordination, improving communication, etc,” said Col. Terrence Freehan, 88th Mission Support Group commander at Wright-Patterson AFB, Ohio.

“The combination of these processes will make things easier for deployments and combatant commanders of the areas to which the Air Force deploys,” he said. “I’ll deploy as a mission support group commander, and think it will allow me to much better respond to warfighter requirements and greatly ease their ‘who do I see about this’ problems.”

The companion piece to the logistics readiness squadron is the merger of logistics plans, transportation and supply officer AFSCs to further complement the effectiveness of this squadron.

The logistics professionals have continued to transform their operations to bring support to the warfighter faster, easier and with fewer coordination points.

A commitment that runs deep

Logisticians across the command are fully engaged in these “21st Century Air Force” initiatives.

According to Maj. Sharon McKenzie, AFMC Supply Division, “The many changes have not all been easy, but in this war against a sometimes unknown enemy everyone in the logistics field is committed to producing the best system for the best Air Force in the world.”

— 2nd Lt. Michael A. Varaly, AFMC Public Affairs

Divestiture takes aim at AFMC efficiency

Tech. Sgt. Carl Norman
AFMC Public Affairs

Sifting through more than 250 suggestions for work the command could stop doing, Air Force Materiel Command officials are trying to free up resources and improve efficiency.

The suggestions are part of AFMC's divestiture initiative aiming to eliminate processes and procedures no longer necessary or practical and re-engineering other processes to reduce cycle times to get things done quicker and with less bureaucracy, according to Col. Bruce Litchfield, AFMC transformation deputy director.

A call for suggestions

The suggestions came in response to a letter Gen. Lester Lyles, AFMC commander, sent asking wing and center commanders to submit ideas as to what they could stop doing at their level. He also asked them to identify things at any level headquarters' element that require products nonessential to mission accomplishment. Calls for additional suggestions will come quarterly.

In all, 67 actions at the center or headquarters level have been stopped and 16 have been re-engineered according to Col. Litchfield, local-commander authority. Some of the major items divested include: reports of performance indicators at AFMC headquarters; monthly AFMC significant events reports; and reports of electronic commerce metrics. Information on some divested initiatives can be found in the related story on the next page.

Executive steering committee

Additionally, AFMC's Transformation Executive Steering Group, with Lt. Gen. Charles Coolidge, AFMC vice commander, at the helm met Oct. 25 to review divestiture candidates needing major command approval. The Oct. 25 review was the second in what command transformation experts plan to make a regular gathering to send ideas up the chain, said Mr. Douglas Fleser, AFMC transformation manager. He said the group has met twice since then, with more scheduled.

With the steering group energized and suggestions coming in, Gen. Lyles is serious about divesting non-value added items.

"People evaluating divestiture candidates must give us very good reason why we shouldn't divest something and have strong justification to back it up. Otherwise, we're going to assume it's approved," he said.

Just say 'no'

Not only is Gen. Lyles taking divestiture seriously, but so is Secretary of the Air Force James Roche. Gen. Lyles said when he approached Secretary Roche about asking permission to divest some things that may affect higher headquarters, Secretary Roche said, "Don't ask. If you ask permission, you may get an answer you don't like. Just stop it and if somebody wants something to continue, they'll yell and scream for it."

"That's the attitude we're going to take," Gen. Lyles said. "We still might ask permission on a few things, but otherwise we're just going to stop doing it and see if anyone complains."

Along with looking for items to divest to save time, money or to re-engineering existing processes, Gen. Coolidge encourages everyone to use their common sense.

"Whoever submits a divestiture item needs to give us an idea of where we're going after it's divested," Gen. Coolidge said. "Thoroughly consider who and what the item is going to effect.

"If the idea doesn't affect people above you, you can stop doing whatever you want. But if it does, give that person or organization a call to see if it really can be divested or if there are some legal or other reasons it needs to be continued or re-engineered."

A critical need

According to Col. Litchfield, divesting is critical for AFMC and the Air Force to meet Defense Secretary Donald Rumsfeld's transformation challenge for military departments to develop ways to adapt quickly to new environments and uncertain circumstances. Those circumstances were "shown in spades" in the Sept. 11 attacks, Col. Litchfield said.

"The whole emphasis behind divestiture is to allow us to stop doing outdated and unnecessary activities that may have been relevant during the Cold War and focus efforts on adapting to this post Sept. 11 environment."

Multiple benefits

Divesting nonessential policies and practices has many benefits, according to Col. Litchfield. Giving the commander in the field more resources to do his or her job, perfecting the way the command does business and increasing its capacity to provide better warfighting capability top that list. But a secondary benefit goes directly to AFMC and Air Force people.

"We know our workforce thinks a lot of things they do is unfulfilling or unnecessary. We wouldn't be able to transform very effectively if we weren't responsive to our people in AFMC who are delivering products daily," he said.

"Everything we can do to take away that unmeaningful, unproductive feeling will increase productivity and make people feel good about coming to work everyday — that's a big motivator for us to do this," he continued.

A few bumps

"As with any change or attempt to transform, not everything will go smoothly and there will surely be bumps in the road," Col. Litchfield said. Some of those could cause frustration and confusion.

"People are going to get frustrated because some things we won't be able to stop doing," he said. "Whether it's mandated by law, such as environmental compliance that can land people in jail if not accomplished correctly, or some other necessary tasks, people may have to do work they don't see value in. We don't want people to get frustrated because they put in one recommendation and it doesn't get approved."

Although some suggestions may not be approved, that doesn't mean they won't have some impact, said Ms. June Taylor, AFMC transformation program officer.

"It will force whoever owns that process to look at ways to streamline it," she said. "So while the actual divestiture may not happen, some change to the process could."

And maybe the suggestor doesn't see the value in that work, but further information would make it clearer, she said.

It's not threatening

Then there's the confusion people have by looking at divestiture and transformation as a threat to their job — the "If I give this up my job security has disappeared" mindset.

"This isn't a job threat, it's a load issue," Col. Litchfield said. "Divestiture is a good process that has done good things because our people are doing a great job finding non-value added things to divest. Everyone continuing to submit well-thought-out ideas and communicating those clearly up and down the chain will keep it going in the right direction."

Getting to the heart of transformation and divestiture, Col. Litchfield said it's a simple matter of either becoming more effective or becoming irrelevant.

"If an organization stands still, the world around it changes and it becomes irrelevant," he said. "So, we've got to grow, and to do that we've got to change.

"If you look at what the president and secretary of defense have set out to do, we have to transform or we're never going to meet their mandates. We don't want to be irrelevant, so we've got to change, and divestiture is going to help us do that."

AFMC's divestiture examples

Air Force Materiel Command people are putting the command's policies, programs, communicating and reporting practices and other items under the microscope to determine redundancies and nonessential actions that can be eliminated or streamlined.

To date, local commanders and officials at the headquarters here have stopped 67 actions and re-engineered more than a dozen others, according to Mr. Douglas Fleser, AFMC transformation manager. Some of those approved are:

- Stopping the requirement for field units to generate a monthly significant events report because there are other ways of getting the information and this report was duplicating efforts.
- Having maintainers at the Aerospace Maintenance and Regeneration Center at Davis-Monthan Air Force Base, Ariz., stop doing maintenance on aircraft like the C-141, which is going out of the Air Force inventory completely.
- Consolidating reporting on the command's product support and mission area associated activities because information is available at similar sources and existing reports are repetitive and unnecessary.
- Deleting modernization plans metric from the AFMC quarterly executive review product line: Systems program office experts are currently required to brief the status on the number of ongoing modernization plans. This is no longer required because officials said the metric is not meaningful.
- Eliminating the quarterly center executive summary to the AFMC commander: Here center commanders submitted an executive summary of business area activity, but experts found this duplicated business area point of contact efforts because they have to submit quarterly summaries to AFMC headquarters.
- Eliminating the monthly headquarters AFMC depot maintenance mission area video teleconference briefing: Officials found it redundant because there's also a monthly Air Force chief of staff briefing provided to AFMC and CSAF covering the same information.
- Reducing depot 50/50 reporting three times a year: Changing the reporting requirement to once per year makes sure all data is up-to-date and useful, and it saves an estimated one-third man-year of labor per aircraft product directorate per year.
- Deleting HQ AFMC performance indicator reporting: Here each systems program office staff reports performance indicators for AFMC's quarterly executive review — number of modification program funded and approved versus those planned. Officials found this to duplicate other existing reporting processes.
- Eliminating the requirement to report electronic commerce metrics: AFMC contracting directorate experts eliminated the requirement for each center to report metrics quarterly on electronic commerce.
- Eliminating the requirement to print acquisition contracts and replace it with using electronic versions.

"You're talking manpower equivalent of weeks of effort for these initiatives alone," said Col. Bruce Litchfield, AFMC transformation deputy director. "Now multiply that times other redundancies, nonessential taskings and requirements out there and you're talking about pretty significant savings."

Additional divestiture items will be reported as they become available.

— Tech Sgt. Carl Norman, AFMC Public Affairs

Tech. Sgt. Harold Greene of the 412th Flight Test Squadron marshals in a C-135E Speckled Trout after it touched at Edwards AFB, Calif. The test team will begin using the aircraft next spring for communications testing and executive airlift. Edwards is one of three AFMC Centers that recently met at Eglin AFB, Fla., to begin tranforming the Air Force's developmental test and evaluation mission to a customer-friendly format. (Photo by Mr. Phil Kocurek, AFFTC)

Command changes focus to customer-friendly operations

Col. Craig Wolfenbarger
AFMC Operations Directorate

A team of Air Force Materiel Command professionals met with senior leaders Nov. 21 and 22 at Eglin Air Force Base, Fla., to begin transforming the Air Force's developmental test and evaluation mission to a customer-friendly format.

Senior leadership from Air Armament Center at Eglin, Arnold Engineering Development Center at Arnold AFB, Tenn., and the Air Force Flight Test Center at Edwards AFB, Calif., gave a thumbs-up to the Air Force Materiel Command Directorate of Operations-led Test and Evaluation Mission Area Change Team transformation vision and methodology when they met.

Presenting a challenge

Brig. Gen. Perry Lamy, AFMC director of operations, reported that he has challenged the team to "transform the three developmental test and evaluation centers into a seamless process enterprise to better serve our customers." Objectives include: focusing on the customer; improving cycle time; improving business execution; creating an environment for professional growth and reinventing test and evaluation to prepare for the future.

A single vision

The team's vision is to have a single Air Force Test and Evaluation organization, managed as an enterprise.

This vision includes providing combined developmental testing and operational testing expertise to the Air Force early and throughout the development and sustainment phases of a weapon systems life cycle.

The vision supports providing enterprise stewardship of the test and evaluation infrastructure to preserve core capabilities while investing in the necessary future capabilities that will ensure delivery of the next generation of America's most advanced weapon systems.

The senior leadership agreed to join a senior steering committee providing top-level guidance and support to the change team as it sets off to apply the process enterprise "playbook" taught by leading-edge business guru Dr. Michael Hammer, who advocates "radical change in business processes for dramatic improvement." The change team is in the final throws of completing training and becoming "Process Masters" in using this transformation methodology.

The change team is composed of seven-members brought together from both the command and field units. Core members include representatives from AFMC Directorate of Operations and one representative from each AFMC center.

It begins here

The change team's initial thrust is aimed at reengineering currently inconsistent AFMC developmental test and evaluation center-focused processes into a coherent set of consistent processes to be used across the test and evaluation enterprise.

The currently approved transformation activity does not include an organizational change component at this time, with no consolidation or combining of test centers planned. The concept is for centralized process ownership for all enterprise processes, with decentralized execution of those processes as appropriate.

The concept is to have process owners come from both the field and headquarters. Seamless means that we are attempting to eliminate the seams currently seen by our customers inherent in having three independent test and evaluation centers, with individual and separate processes, and is not a fix to the total systems performance responsibility or even a diagnosis that a fix is required, according to Gen. Lamy.

Providing the best solutions

The basis of this transformation effort is to have an Air Force test community recognized as providing the best solutions and supplying the best services to our customers.

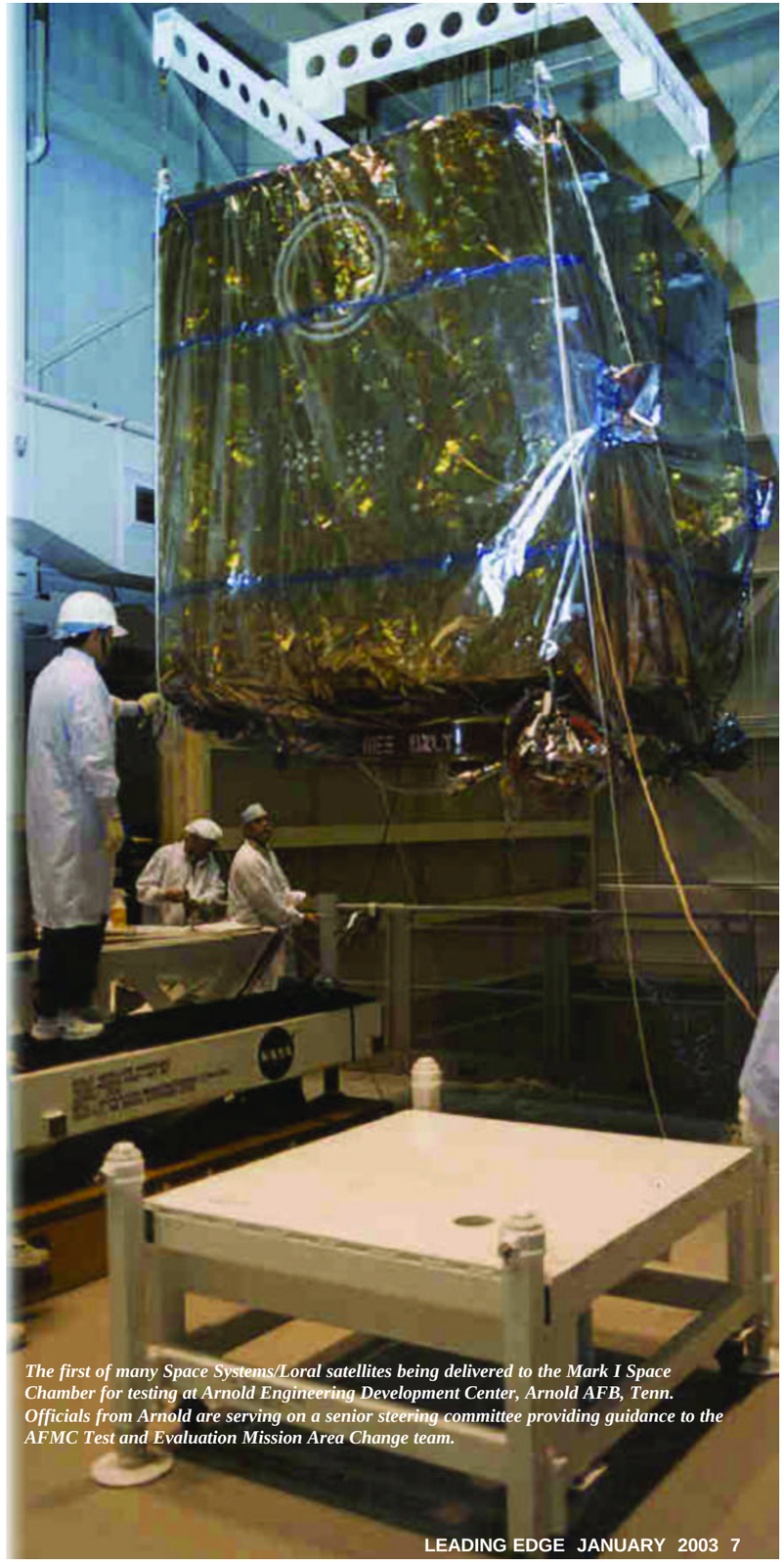
The team presented a preliminary top level mapping of three core processes, five enabling processes and one governing process into a developmental test and evaluation enterprise process map. It will initially focus on designing the first-level details of these processes and on four specific projects as part of the first spiral efforts associated with this transformation.

The senior steering committee agreed to recruit and appoint a process owner for the manage test competencies process in the near future and has identified a potential spiral one project for this process as well.

A deep commitment

Test and evaluation transformation is an integral part of the larger AFMC transformation effort and is leading the way as a pilot project, according to Gen. Lamy, AFMC Operations director. Senior leaders have joined Gen. Lester Lyles, AFMC commander, in applauding the initiative of the test and evaluation community in leading this program, he said.

"We are committed to implementing the Air Force's transformation vision. Leading the way in AFMC is the test and evaluation mission area," said Gen. Lyles. "We are convinced that this work is key to AFMC's future success."



The first of many Space Systems/Loral satellites being delivered to the Mark I Space Chamber for testing at Arnold Engineering Development Center, Arnold AFB, Tenn. Officials from Arnold are serving on a senior steering committee providing guidance to the AFMC Test and Evaluation Mission Area Change team.

Going ‘Lean’

Process improves ALC’s performance

A C-5 undergoes programmed depot maintenance at Robins Air Logistics Center, Warner-Robins AFB, Ga. (WR-ALC photo)

Going “Lean” has allowed Air Force air logistics center staffs to reduce overtime by almost 50 percent, cut flow time nearly in half and save thousands of dollars since Jan. 1, 2000.

Workers at Warner-Robins Air Logistic Center at Robins Air Force Base, Ga.; Oklahoma City ALC at Tinker AFB, Okla.; and Ogden ALC at Hill AFB, Utah., are applying a way of thinking where every process used to support customers needs to eliminate as much waste as possible, according to Ms. Deb Walker, Air Force Materiel Command Logistics Directorate deputy director for depot maintenance. The concept is based on the book “Lean Thinking” by Mr. James Womack and Mr. Daniel Jones.

The little things

In AFMC, lean takes things as simple as reviewing processes, consolidating tools into one kit, moving tools and material closer to aircraft maintenance lines and posting tracking boards to make mechanics’ jobs easier and more efficient.

“This is the first thing that’s worked really well in industry that’s also worked for us,” Ms. Walker said. “We’re getting excited about this program from the top leadership all the way down to the worker on the shop floor.”

Initially, Warner-Robins implemented lean on a small-scale, but when the center started seeing the results, the program spread.

In the center’s C-5 program, lean allowed workers to reduce overtime by 45 percent and flow days by 22 percent, according to Ms. Jessical Wilson, Warner-Robins lean operations consultant.

“We eliminated a lot of wasteful things in the process, like time spent walking to a different location to find tools, and ways to consolidate the workload,” she said.

A process called 6-S was applied in the avionics division. Six-S stands for sort, straighten, scrub, standardize, sustain and safety, a process where work areas are cleaned out and unused equipment is removed so the space can be reorganized.

Mr. Lon Roderick, mechanic in the center’s avionics directorate C-130/KC-135 transmitter and receiver section, said lean initiatives helped his section streamline the workflow.

“The big thing was moving everything onto one line — the parts and the tools — and having everything organized where we could find it,” he said. “Now everything has its place.

Lean is still in the infancy stages at Oklahoma City, according to Maj. Lina Henneman, center engine division lean planning team project manager. One lean technique used is a week-long Kaizen event focusing on one shop.

Kaizen is a Japanese word meaning gradual, orderly and continuous improvement. During the event, a team examines the shop and finds ways for workers to accomplish tasks more effectively and efficiently, Maj. Henneman said.

It’s working

It seems to be working. In the past two years, Oklahoma City workers have conducted 34 Kaizen events which eliminated 8,750 excess tools, freed up 5,865 square feet of floor space and reduced by more than 4,500 miles the distance that parts traveled annually.

The engine division created a lean cell in the F-110 low-pressure turbine nozzle shop and reduced flow time by 55 percent, average repair costs by almost $4,000 and repair travel distance by 78 percent, Maj. Henneman said.

Supporting customers

“The nozzle cell is a prototype lean shop,” Maj. Henneman said. “If we can lean out all of our shops, imagine what it will do for the warfighter, our customer. We’re getting what they need out the door faster, at better quality and lower cost.”

The aircraft division restructured the process for moving aircraft through docking stations by moving them in groups of three and only spending a certain number of days at each of five docking stations. Flow days have already dropped from 407 in 2000 to 224 at the end of August 2002, according to Capt. Jennifer Bradley, Oklahoma City process improvement and control branch deputy chief.

“Our ultimate goal is to keep the mechanics on the dock and jet,” Capt. Bradley said. “If we bring everything to them, we will have a better product, faster, thus returning more high-quality jets to the warfighter.”

Ogden ALC started the lean program in the aircraft directorate’s F-16 wing shop and A-10 shop in January 2001.

The F-16 wing shop began using a color-coding system similar to a traffic light. Workers communicate immediately to all levels of management from the division chief to the shop floor supervisor when a process goes yellow, or is encountering problems, said Mr. Rick Painter, Ogden ALC lean process improvement process analyst.

He said plans are then developed to eliminate the root cause of the problem so it doesn’t occur again and to prevent the process from going red. This color-coding and notification system helped reduce flow days by half, saving $1,000 per day and greatly reducing overtime.

The center’s A-10 shop paint and blast corrosion program was behind schedule and over budget due to process constraints, Mr. Painter said. When they implemented lean in the blast area, they standardized the paint and blast procedure across all three shifts and established point-of-use material, which brings needed items closer to the aircraft. They’ve now reduced flow time by almost 40 percent, enabling them to remain on schedule.

Ups and downs are good

“Both effectiveness and production have gone up, while overtime and costs have gone down,” Mr. Painter said. “The mechanics in many areas are now starting to apply lean on their own.”

Quick and dramatic results keeps the motivation high for applying lean, but the people in the ALCs also find motivation by thinking about their customers, the warfighters, Mr. Painter said.

“We’re getting out a better product on time or ahead of schedule by implementing lean,” he said. “We’re improving the processes, making ourselves more competitive, saving tax dollars, easing mechanics frustration and improving capabilities for the warfighter.”

— Ms. Sarah Anne Carter, AFMC Public

Lean *continued on next page*

DMRT controls cost, improves efficiency

Depot Maintenance Reengineering and Transformation continues to make progress on critical processes providing depot maintenance support to the warfighter and improving financial performance of depot maintenance activities.

New maintenance organizations

Each of Air Force Materiel Command’s air logistics centers declared full operating capability of new maintenance organizations Oct. 1, 2002. “These organizations enable depots to better respond to unexpected changes in warfighter requirements and provide flexibility,” said Col. Andy Busch, deputy director for logistics operations.

“The new maintenance organization will enable Air Force Materiel Command to implement other depot maintenance reengineering and transformation initiatives to give depot maintenance better accountability in the areas of performance, quality and cost,” he said.

Representatives from each of the center maintenance organizations reported a relatively smooth transition to the new organization and have already seen improvements in communications. By consolidating the overhead resources of formerly separate directorates, one directorate now has control and authority over maintenance budgets, manpower, hiring, workload flexibility, industrial operations and war plans.

Standardized training

Also in October each center stood up a new maintenance training organization. The new organization provides a single source of advice and direction to depot maintenance workers, eliminating multiple training programs, which were managed by various organizations.

“Now that the maintenance training organization is up and running, we can concentrate on developing maintenance orientation and technical training plans using blue suit training structures as a model,” said Brig. Gen. Terry Gabreski, AFMC director of logistics.

These standardized training programs will focus first on aircraft mechanic and planner job series through prototype efforts at Warner-Robins Air Lotistics Center, Ga. The training plans are expected to be implemented AFMC-wide by May 2003.

Information technology advances

The information technology team has completed their initiative to develop a master plan supporting the integration and development of hardware and software, while avoiding the costs associated with disjointed efforts or the development of redundant systems.

The long-term benefit of information technology initiatives is to provide systems to equipment shop floor workers that contain accurate, real-time information to enhance depot productivity.

Another area that has seen significant headway is the initiative to apply a standard process improvement strategy. Many of the elements required to build a command standard concept of operation are in place. The Object Czar Depot Maintenance Analysis System, or OZ, was selected to facilitate the process. The web-enabled system is a one-stop location for command standard metrics and analysis tools.

“OZ will allow the workforce and supervisors at all levels to know how they’re doing against established metrics,” said Gen. Gabreski.

Initial benchmarking training is underway at each ALC. A web-based tracking system for process improvement has also been established, allowing for information to flow between centers and an expansion of the benchmarking database.

— Ms. Crystal Lavadour, AFMC Public Affairs

Depot maintenance reengineering and transformation efforts are making progress in supporting the warfighter and in saving time and money. Shown here are two workers in the B-1 electrical shop at Tinker AFB, Okla. (OC-ALC photo)

Organizational Transformation: A look at Air Force Research Lab

Maj. Gen. Paul Nielsen
Air Force Research Laboratory Commander

Today, all organizations face constant change. Change comes in many forms — new competition, new technology, even fundamental shifts in customer demand. There are really only two alternatives for organizations faced with change —use the situation as motivation to transform dynamically, or sit idle and drift into irrelevance or obsolescence.

To someone unfamiliar with AFRL, we may not appear to face the same pressures as private corporations. We do.

Recently, military organizations have been forced to do more with less. As resources and personnel become increasingly scarce, AFRL continuously searches for better ways to advance the science and technology that produces superior products for our warfighters. We want to expand AFRL's world-class effectiveness in providing cost-effective, cutting-edge technology for our nation.

Organizations must make life easier for their customers — by simplifying interactions, integrating planning and delivery, and saving time and money. Organizations need to become fanatics about their processes, measuring the things that customers care about, and providing appropriate solutions. These ideas don't just apply to commercial companies; they are every bit as valid for military organizations such as AFRL.

To meet the demands of these changing times, and ensure we meet the needs of our customers, we are continuing the legacy of our predecessors, and following Air Force Materiel Command Commander Gen. Lester Lyles' lead by focusing internally and leading the entire laboratory through transformation.

These efforts will serve to fundamentally change the way AFRL does business — helping us handle any changes in our external environment — anticipated or otherwise.

Reasons for transformation

AFRL was created in 1997, when four independent research laboratories and the Air Force Office of Scientific Research were consolidated into a single organization. Today, AFRL is composed of nine Technology Directorates and Air Force Office of Scientific Research. Our work occurs at ten major research sites throughout the United States.

Historically, these research sites were autonomous organizations, and today, many individual processes and systems still exist. Our ability to integrate data from the TDs is crucial, as using disparate data to make lab-wide decisions is dangerous.

To function as a single entity, standardized processes and common data definitions are essential to enable centralized and accurate decision-making. We recognized these problems and developed a series of core strategies to address them.

One such strategy is to fully integrate our business operations. The largest effort under this initiative is the implementation of an Enterprise Business System, or EBS, to streamline and integrate processes throughout AFRL.

EBS and process-based change

Reviewing procedures allows us to reflect upon outdated practices and identify where technology will aid efficiency. Once we've standardized our processes, technology can integrate our TDs under one umbrella, leading everyone to use the same tools and data definitions.

AFRL's mission is to lead the discovery, development, and integration of affordable warfighting technologies for America's air and space force.

Through EBS, we will reallocate scarce resources from administrative and support functions to a greater focus on research and development. With EBS, AFRL will have an enhanced capability to make timely and effective business decisions enabling organizational transformation.

Such a sweeping endeavor requires the coordination of thousands from sites across the U.S. It also requires a lab-wide culture change. Our biggest challenge will be to begin to think of the entire Lab, not just TDs or HQ Functionals, as our corporate enterprise. We must embrace both our Information Technology infrastructure and our IT data as corporate resources while pursuing integration across the entire enterprise. Equally important, any new applications must be enterprise process-driven.

We will face many challenges in becoming a seamless operation. Through EBS, AFRL takes established ways of doing work and questions their validity. Aligning the organization will help, but it's essentially about how fast AFRL can anchor the new ways of doing business and adapting to the philosophy of enterprise thinking.

AFRL transformation-first steps

The EBS program office has been gathering information and building a business information framework. The team emphasizes: continued process modeling to identify and model the remaining core functions; devising a "Plan & Program Module" to report planning and budgeting information; creating a Laboratory Management Information System to streamline and standardize repeatable processes; and developing process improvements and standardized project tools for AFRL's scientists and engineers. The first LabMIS deliverables will likely focus on streamlined financial management processes.

In September, we selected the build contractor for the first EBS Module, "Plan and Program." This module is expected to be operational early this year, and is a big step in helping AFRL become a unified enterprise. Future EBS modules will address human resources and the protection of corporate assets.

Once EBS is active, AFRL will benefit from improved decision-making, as well as time and cost savings across the entire enterprise.In the end, this means better support to America's warfighters — and that's why we're here.

Affairs

Acquisition Excellence: Unleashing the power

The Air Force Research Laboratory meets challenges head on as we work to unleash the power of innovative science and technology for our Air Force. We are also at the forefront of Air Force transformation efforts both in business practices and in military capabilities. In response to the Air Force's transformation needs, we formed the AFRL Acquisition Excellence office.

Acquisition Excellence focuses on enhancing processes that transition technologies into AF weapons systems. Working in partnership with other AFRL components, AE is dedicated to four key objectives:

— Improving collaboration between AFRL and the System Program Office, depot and contractor team

— Ensuring training is available to AFRL personnel on research and development systems Engineering techniques and tools

— Effectively communicating lessons learned, best practices, transition opportunities to AFRL personnel

— Continuing to enhance the processes and tools that support systems engineering in an R&D environment

Several initiatives are underway, including new approaches to dismantle barriers between the special program office and contractor teams. We recently defined a best practice template that identifies key steps for building a cohesive AFRL, SPO and contractor team.

This template guides AFRL personnel through the steps necessary for working with the SPO or depot and their contractor team in identifying and understanding the key opportunities, expectations and systems engineering constraints facing the customer.

These inputs are then able to drive the joint development of a comprehensive technology support strategy for that customer. The strategy ranges from "now term" which capitalizes on the expertise and facilities resident in AFRL, to long-term development of integrating concepts to meet the more challenging technology needs.

The results can directly feed the ATC process, which is a technology transition partnership between AFRL and the MAJCOMs. This support strategy will also be used by the SPO to ensure the resulting technology can be successfully integrated into their schedule, budget and contracting plans.

Acqusition Excellence will facilitate and explore ways to transform AFRL's business practices, passing on the lessons learned and best techniques to the rest of the laboratory. These changes will allow AFRL to achieve a new level of partnership with our customers, ensuring effective and efficient movement of technology solutions to the warfighter.

— Maj. Gen. Paul Nielsen, AFRL Commander

Agile Acquisition

Changing the way we do business

The Agile Acquisition Program is designed to change the way the acquisition business is conducted, according to Mr. David Franke, director of Air Force Materiel Command Acquisition Center of Excellence at Wright Patterson Air Force Base, Ohio.

"The ability to respond to an ever-changing trend is far more dynamic than it was 10 or 15 years ago," he said. "The ability to keep abreast of those trends is one of the goals of agile acquisition.

"We can no longer live with the long development times that we've seen on major weapon systems. The processes which required 10 years to get a weapon system out to the warfighter have to be improved," he said.

Changing culture

One of the ways to achieve that goal is to radically change the acquisition culture. Reductions in excessive paperwork and over-specification of requirements, as well as reducing cycle times and even limiting formal meetings, are only some of the myriad initiatives being undertaken to change that culture.

One goal of agile acquisition is to provide the warfighter with today's technology today, noted Mr. Franke, and in a cost-effective manner.

"It is designed to be a leaner, more effective approach to designing, building, testing, fielding and supporting the weapon systems that warfighters need," he said.

Mr. Franke added agile acquisition is "getting together with the warfighter and collaboratively developing those requirements so the warfighter and the acquirer both know, agree and understand what those requirements are."

Another goal is to improve the credibility of the acquisition folks in the eyes of the warfighters, he said.

"That credibility has eroded over the years due to cost overruns and longer cycle times in getting the various systems to the warfighters when they needed them," Mr. Franke said.

Achieving that goal will require the acquisition professional to collaborate with the warfighter from the start. It gives individual managers the responsibility and authority to look at broader concepts and issues affecting programs that are different.

High level interest

The program is highly supported by the Secretary of the Air Force Dr. James Roche, Chief of Staff, Gen. John Jumper, and Gen. Lester Lyles, AFMC commander.

Gen. Lyles noted "Our objective is to field today's technology today, not yesterday's technology tomorrow."

Mr. Franke hopes the end result of agile acquisition will be the ability to "deliver to the warfighters what we promised, when we promised it and for how much we promised."

— Mr. Rufus Thomas, AFMC Public Affairs

AFMC is changing the way acquisition is done for better support to the warfighter. Here, an engine bracket is being positioned on an engine cart before swapping out the engines on a C-141B Starlifter at Naval Air Station, Sigonella, Italy, in support of Operation Enduring Freedom. (Air Force photo by Staff Sgt. Ken Bergmann)

Wright-Patterson volunteers help pick up the pieces

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — 2nd Lt. Shawn Fontenot, Air Force Research Laboratory, breaks down the wall of a garage destroyed by a tornado during disaster cleanup in Van Wert, Ohio. Lt. Fontenot was one of approximately 30 company grade officers who showed up from Wright-Patterson to help out. The tornado struck packing winds of more than 200 mph, Nov. 10, killing five people and injuring 25 others. A state of emergency was declared in both Van Wert and Ottawa counties; 109 homes and businesses were destroyed during the storm.

— Reported by AFRL Public Affairs (Photo by 2nd Lt. J. Elaine Hunnicutt, AFRL Public Affairs)

AFMC opens new combat training center at Eglin

EGLIN AIR FORCE BASE, Fla. — Air Force Materiel Command put an end to its troops' "space available" combat training status recently, graduating 25 security forces members from its new Brave Defender Readiness Training Center here.

As the center's inaugural class, the graduates represent the first of approximately 750 students center officials expect to train each year in ground combat skills, including basic infantry tactics as well as entry control operations, mounted and dismounted operations and military operations on urban terrain during their two-week course.

AFMC officials are partnering with those from Air Force Special Operations Command and Air Force Reserve Command in standing up the new training center.

The partnership comes as troops from these respective commands were having trouble getting training slots at the already-existing Air Combat Command Silver Flag Alpha and Air Mobility Command Air Mobility Warfare Center facilities, according to Mr. Mark Rogers, AFMC security forces directorate at Wright-Patterson AFB, Ohio.

— Reported by AAC Public Affairs

Directed energies shown at World Space Congress

KIRTLAND AIR FORCE BASE, N.M. — Two directed energy technologies from here were showcased at an international exhibit in Houston, Texas, recently.

An estimated 13,000 top space leaders, scientists and engineers from around the world attended the once-each-decade World Space Congress, where the Air Force Research Laboratory's Directed Energy Directorate showed examples of its world-class telescope capabilities and its research into fiber laser technology.

A model of the directorate's largest telescope — a 3.67-meter telescope in Maui, Hawaii — was displayed.

Also shown was a video of various satellites photographed by earth-based telescopes and fiber laser technology that offers the potential for weapons class lasers small enough to fit on fighter aircraft.

— Reported by AFRL Public Affairs

SSG improves information technology purchasing site

MAXWELL AIR FORCE BASE, GUNTER ANNEX, Ala.— An enhancement recently implemented in AFWAY, the Air Force's newest information technology purchasing site, is based on a competition and source requirements policy clarification from the Air Force Contracting Office.

Previously, users were required to provide three sources to make a purchase. Now, there is no requirement to have more than one source listed since the products listed on AFWAY have already been competitively selected.

AFWAY is an online ordering system that places information technology products and more than 30 vendors at the fingertips of every Air Force member with IT needs.

The program supports purchasing and tracking of information technology products through a single, seamless process. Tracking of IT assets is ensured by an interface to the information processing management system.

The program, which was fielded in March, is the Air Force's re-engineered process for managing and purchasing IT products. The web-based tool improves the procurement and purchase process and enforces the Air Force Chief Information Officer standards for IT.

The site is enjoying increased usage Air Force wide.

— Reported by SSG Public Affairs

Hill maintainers ‘lean’ on brakes

During his May 2002 remarks to a group of New York City investors, the Secretary of the Air Force, Dr. James Roche, challenged Air Force leaders to “to create a culture that inspires…thinkers, innovators and risk takers.”

Innovation and transformation initiatives throughout the Air Force Materiel Command have sparked improvements at all levels, and the Commodities Division at Hill Air Force Base, Utah, is nurturing a particularly promising project.

Three production branches comprise the bulk of the 1400-person division. Its mission encompasses repair and overhaul of aircraft landing gear components, wheels, brakes, power systems, hydraulics, armament, fuels and other important systems.

Learning the fundamentals

Seeking opportunities to increase efficiency and effectiveness, the division contracted a consultant, Mainstream Management, in August 2002, to teach the fundamentals of “Lean.” Much has been written about lean, but it is simply a collection of techniques applied vigorously to reduce wasted resources.

The aircraft brake repair line, a business area producing 4700 brakes and components annually, was targeted for improvement. The division’s immediate goals are to reduce the number of brakes in work by 25 percent, flow days by 50 percent and to reduce the hourly expense rates.

By the end of September, two teams were trained on lean fundamentals: the implementation team, and the steering team.

The implementation team assessed the range of brake workload across 14 weapon systems to determine the scope of repair requirements, inductions, disassemblies, condemnations and assemblies.

A long journey

Next, they charted movements of each type of component throughout the landing gear facility and categorized the parts into families. Then, the repair process was segmented into three parts and data collected.

Amazingly, 25 technicians must physically travel 9,500 miles within the facility to produce the brakes, and more than 60 percent of all steps in the brake repair process involve waiting until an ideal number of components accumulated before the next process was started.

After the implementation team calculated a minimum of 21 assemblies per production day, or one brake every 18 minutes, required to produce 4,700 brakes, they turned to solving a crucial question: How to reduce an average 70-day flow time?

By November, the first segment of analysis — disassembly, cleaning and inspection — became the team’s focus for improvement. Within this area, for example, the F-16 Block 50 brake torque tube travels 3,007 feet to complete its process. Waiting between process steps averages 32 days.

The team created a repair cell layout with all needed equipment for this first segment. Costs were limited to repairs of some on-hand equipment and to those associated with equipment movement.

The steering team contributed by having resources ready to execute the implementation team’s requirements. The new cell, compact, efficient and conducive to “single-piece” flow, the opposite of batch processing, is expected to yield impressive results, and it did not interfere with current production output. Technicians, with a normal daily workload began completing their tasks in 6 hours, and the same F-16 Block 50 brake torque tube now travels 112 feet in less than one day.

A model concept

Today, the two teams continue working deeper into processes, learning more about lean. The new cell, already a model concept, will continue to evolve as the implementation team shifts its focus to the remaining two segments of the brake repair line.

When complete, efficiencies are expected to yield an annual savings of $500,000 by fiscal year 2005.

Aside from the predicted increases in production efficiency, the benefits of lean are expected to ripple throughout the entire division; lean is a grass-roots phenomenon revealing better production methods.

— Maj. Duane Mills, OC-ALC

Workers in the Commodities Division of the Ogden Air Logistics Center, Hill AFB, Utah, are learning to reduce flow days and expense rates by applying the fundamentals of “Lean.” (OO-ALC photo)

Pictured at Whiteman AFB, Mo., the deployable shelter system acquired and developed by Aeronautical System Center’s B-2 System Program Office at Wright-Patterson AFB, Ohio, will allow the B-2 Spirit stealth bomber to be based overseas for the first time. In past combat operations, the aircraft were forced to take off and land at their home base, leading to exhausting 30-hour flights for the crew.

ASC puts bombers closer to

The deployment of B-2 Spirit stealth bombers to bases overseas will be possible, in part, due to the work of the B-2 System Program Office’s shelter team, according to program officials at Wright-Patterson Air Force Base, Ohio.

The B-2 has never before been based at a forward operating location and has, in past combat operations, been forced to fly missions of up to 44 hours to strike targets and then return to Whiteman AFB, Mo., said Col. Janet Wolfenbarger, B-2 SPO director.

It takes a team

According to the program’s manager, people from various locations with diverse expertise came together to make the project a success.

“Personnel in the Combat Support Systems Office at Eglin AFB, Fla., played a vital role in the successful acquisition of the B-2 shelter,” said Ms. Marta Conant, B-2 SPO Shelter System Program manager.

In addition, the B-2 Shelter Team is comprised of personnel from Headquarters Air Combat Command, Langley AFB, Va., the 509th Bomb Wing at Whiteman, and the 49th Materiel Maintenance Squadron at Holloman AFB, N.M, she said

When the B-2 deployed to Guam in 1998, there was a shortage of environmentally controlled space to do maintenance on the aircraft’s low observable — or stealth — coatings and materials, said Col. Wolfenbarger. Based on this, ACC, the operational user of the aircraft, challenged Aeronautical Systems Center to provide them with a deployable shelter capable of supporting the B-2 maintenance operations.

“We had to work with warfighters, force-planners and logisticians to come up with a viable option that would meet ACC’s needs,” she said.

Special needs

Those needs included specifications that the shelters withstand temperature extremes, 40 pounds of snow per square foot and 110 mph winds. Working with the contractor, the team was able to accomplish this in a shelter system that can be stored and shipped in 23 containers.

The contract for the shelters was awarded in October 1999 to American Spaceframe Fabricators, Inc. ASFI delivered the first shelter system to Whiteman, where the team conducted the test and evaluation program.

In total, the shelter system was erected and dismantled three times successfully by 49th Materiel Maintenance Squadron and contractor personnel.

To further demonstrate the capabilities of the shelter system, 509th Bomb Wing maintenance crews successfully performed necessary low observable maintenance on the B-2 while it was in the shelter. A survey of the maintainers reported that the shelter was completely effective.

“We’ve built a system equal to or greater than current hangar capabilities,” said Col. Wolfenbarger. “That’s the kind of support we want to give the warfighter and the capability we want to give the theater commanders.”

— 2nd Lt. Tracy Bunko, ASC Public Affairs

Power technologies create revolution

‘More electric aircraft’ initiative; a real technology transformer

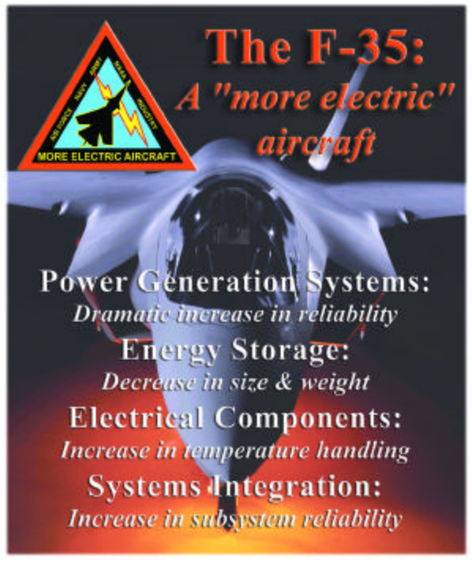
A revolutionary transformation in aircraft electrical power technologies is underway that promises the Air Force greater aircraft reliability and a significantly smaller logistical tail to support tomorrow’s air and space force.

It’s called the “more electric aircraft” and it’s no pipe dream possibility, but reality, thanks to power technology scientists and engineers in the Air Force Research Laboratory’s Propulsion Directorate.

JSF is proof

The proof is in the newly christened F-35 Joint Strike Fighter, which incorporates technologies envisioned, designed, developed and tested by the propulsion directorate’s power division. By teaming with its sister services, universities and aerospace industry partners, the power team has been able to translate three decades of technological progress into stunning advances that promise greater warfighter capability — and a lot less extra baggage at fixed base and deployed locations.

Their secret? Use electrical power to drive aircraft subsystems that are currently powered by hydraulic, pneumatic or mechanical means, said Dr. Jerry Beam, a senior aerospace engineer specializing in electrical power technologies. This includes gearboxes, hydraulic pumps, electrical generators, flight control actuators, and a host of other aircraft subsystems, he said.



More electric emphasis

Emphasis now is on giving aircraft designers more options by using electrical power over traditional methods, he pointed out. New concepts like electric environmental control and electric fuel pumps, along with magnetic bearings for generators, and eventually “more electric” turbine engines are in the works. They promise dramatic simplifications in aircraft system design, while improving reliability and maintainability in the years to come.

“More-electric aircraft,” or MEA, systems involve the evolutionary application of electrical power systems, electronics and distributed architectures to simplify much of the complexity inherent in hydraulic and pneumatic aircraft systems,” said Mr. Steve Cloyd, senior aerospace engineer specializing in power technologies. “Immediate benefits derived from the wider application of electrical power and electronics include performance as well as savings in weight, space and overall life-cycle costs.” The effort also promises a drastic drop in the bulky, heavy aerospace ground equipment which tasks always high-in-demand airlifters to haul it downrange for deployments and contingencies.

For example, it takes 16 C-141 Starlifters to deliver the supporting AGE for two dozen F-16 Falcons. The haul includes electric generators, hydrazine servicing carts, air conditioners, high-pressure air carts and hydraulic fluid “mules,” Mr. Cloyd pointed out. “With the MEA concept there could be up to a 20 percent reduction in deployment assets.”

Making these far-reaching improvements possible has been the foundational research, development and testing done by the propulsion directorate, which envisioned and fielded the technologies required to create a more electric aircraft.

Beating challenges

“Much of our work over the last 30 years has addressed the difficult challenge of providing maximum electrical power in minimum weight, which led us to explore new concepts in power generation, energy storage, electrical components and power systems integration,” Mr. Cloyd said.

“There were a variety of technologies that had to be matured so we could build this type of aircraft. Everything from more powerful starter and generators that start turbine engines, to the holy grail of batteries — rechargeable lithium batteries — which provide very high energy density and high power with low weight,” Mr. Cloyd said. “We’ve wanted rechargeable lithium power for years and years and now it’s a reality.” The lithium-ion battery, slated for use onboard the B-2 Spirit boasts the advantage of up to five times the energy output with the same weight of the currently used nickel-cadmium, or “ni-cad,” battery. It is being developed in the propulsion directorate and is set for inclusion in the JSF as well, he said.

Power division milestone

The directorate’s power division also achieved a major milestone recently by completing a full operating speed demonstration of its integrated power unit rotor system at operating speeds in excess of 61,000 rpm.

The IPU is being developed by Hamilton Sundstrand under sponsorship of the propulsion directorate and uses magnetic bearings rather than traditional lubrication systems, said Mr. John Nairus, a thrust manager in the power division and a subject matter expert currently working on the JSF electrical power system.

Its design, based on the elimination of the lubrication system alone, is projected to reduce maintenance by more than 50 percent over conventional approaches and designs, according to Mr. Nairus.

He said energy savings are expected to top 30 percent.

The concept is currently being tested using an F-16 jet fuel starter turbine engine that directly drives a high power starter and generator. If successful, this onboard capability would lead to the elimination of the bulky ground support equipment currently needed to start aircraft.

Electric flight control

Another success story is the “power by wire,” or electric flight control system incorporated into the F-35. As part of the JSF demonstration program, electric actuators, or motors, replaced hydraulics in an advanced fighter technology integration F-16 tested at Edwards AFB, Calif.

The testing proved electric flight controls could be transparent to the pilot. Studies conducted in 2000 also showed integrated subsystems such as electric flight control are more reliable, maintainable and affordable.

“Wires are lighter than hydraulic lines, which give us the ability to provide additional redundancy, which provides greater survivability. And they don’t leak!” explained Mr. Cloyd.

By using power-by-wire the maintenance-intensive, heavy, complex and vulnerable hydraulic systems with their flammable liquids operating at high temperature and pressure would be gone. Gone, too, would be the miles of tubing, the pumps and valves along with the accompanying 55-gallon drums of hydraulic fluid, according to JSF’s developers. Weight could be shifted from plumbing to fuel or mission payloads.

This F-16 illustration provides a graphic example of the ground equipment that could be eliminated by adopting more electric aircraft technologies. Gone would be bulky equipment like ground generators and servicing carts. (Air Force image)

“This effort is transformational in that it fits exactly with the kinds of things the AEF structure is seeking, like lowering the logistical footprint of forces,” Mr. Cloyd said “The idea of significantly lowering that logistics requirement is part of the transformational process and we’re a critical part of making that happen.”

— Mr. Michael Kelly, AFRL Propulsion Directorate

‘More electric aircraft’ — an old concept with new life

In January of 1940, the Army issued requirements for a “superbomber” that could reach speeds of 400 mph, had a range of more than 5,000 miles and carried a bomb load of 2,000 pounds.

Lockheed’s proposal was the XB-30, a bomber that carried a crew of 12. Although not selected from other manufacturers submitting designs — the Boeing XB-29, Douglas XB-31, and Consolidated XB-32 — Lockheed’s comparative studies on benefits of electric vs. hydraulic power for power-assisted flight control set the stage for the future of aircraft power systems.

Ask any aircraft maintainer who busted knuckles or stained his coveralls in the last 60 years and he’ll tell you who won — hydraulics. But not by much according to the history books.

Mr. Randolph Matson, author of “Aircraft Electrical Engineering,” said the primary drawbacks of electrical systems prior to World War II were inadequate electrical generating capacity and the sheer size, weight and volume of switches and control devices for the electrical power.

Despite hydraulics winning the earliest engineering trade studies, scientists, engineers and electrical enthusiasts refused to drop the curtain on their opening act and never lost sight of the potential for developing this power source for future aircraft.

The first military aircraft to use alternating current power was the B-36 in 1946. Much of the technologies used in it grew to become standard for the aerospace industry, said Mr. Joseph Weimer, chief of electrical technology and plasma physics branch.

Foundational power research continued through the 1960s, ‘70s and ‘80s as aircraft electrical power requirements grew and became more complex, but it wasn’t until the Strategic Defense Initiative of the mid-1980s that watershed developments and breakthroughs made the theory of a more electric aircraft, or MEA, even possible, Mr. Weimer pointed out.

“The first aircraft electrical power system generated and distributed only hundreds of watts of electricity to a very small number of loads,” he said. “In contrast, today’s aircraft electrical system has grown by three orders of magnitude in the amount of power generated and distributed.”

In 1991, Mr. Richard Quigley Jr., then chief of the aerospace power division, laid out the vision for the initiative. He knew the concept wasn’t new, but the timing was right, since several key technologies were in place. Breakthroughs in electrical components, capacitors, electro-chemistry, thermal management, auxiliary power units, generators, plasma physics, and super-conductivity all enabled the development of the MEA, said Mr. Weimer. The Air Force Scientific Advisory Board blessed the idea in 1992 and the propulsion directorate began investing in four key technology demonstrations to make MEA a reality: an integral starter and generator; an integrated power unit; a beefier electrical power system; and high horsepower electric actuators, or motors.

Current advancements surrounding aircraft systems have been made in the areas of flight controls, power generation and management. The result — Lockheed’s F-35 Joint Strike Fighter. Research data shows that the F-35 will cost 40 to 50 percent less to operate and support than comparable prior aircraft, saving billions of dollars over the life of the program. A significant portion of that savings comes from the MEA approach, Mr. Weimer said.

— Mr. Michael Kelly, AFRL Propulsion Directorate

Eglin demonstrates new digital chase camera for weapons separation testing

A ground-use digital camera modified for use in the air could replace 50-year-old film equipment experts at Eglin Air Force Base, Fla., use to document and study airborne weapons separation testing.

Transmitting information to the ground while in flight, capturing 200 to 65,000 frames per second and capable of storing up to 4,096 images, the Phantom IV digital camera is what experts from the 46th Test Wing SEEK EAGLE office at Eglin recently demonstrated as a potential source to replace their half-century old film equipment.

"We're purely in the testing phase right now," said Mr. Brian Fraser, 46th Test Wing SEEK EAGLE Office program engineer. "We need to make sure the camera will meet our needs."

Currently, weapons separation documentation is only partly digital, he said. Eglin uses digital cameras onboard to capture weapons release footage from a number of angles under the Airborne Separation Video program the Office of the Secretary of Defense experts developed in 1994.

However, since the cameras are immobile and capture only a few seconds of footage, engineers often rely on a chase camera in a plane following the mission. A person in the following-aircraft's back seat uses the camera like a camcorder to follow the plane and its weapons, Mr. Fraser said.

"Our problem is that our chase cameras are still film cameras," he said. "If we wanted to look at a certain time in the flight that the digital cameras captured, we wouldn't be able."

The Phantom IV is the SEEK EAGLE office's solution to that problem, according to Tech. Sgt. Michael Rivera, 46th Test Wing noncommissioned officer in charge of the 40th Flight Test Squadron Flight Test Aerial Photography section.

"The best part about this camera is definitely the turn around," Sgt. Rivera said after the demonstration. "If this was our film camera, we'd still be waiting for it to be developed. Instead we're here, minutes after flight, looking at what was recorded."

The Phantom IV is also lightweight, reducing camera weight from 20 pounds to 4.5 pounds, helping camera operators better control the camera during in-flight maneuvers, and requires only a notebook computer for programming and a battery pack for power, said Mr. Bill Shipman, applications engineer with Instrumentation Marketing Corporation.

He added that another special feature with the new camera is that the images can be enhanced to perfect the pictures captured.

After using the new digital camera, Sgt. Rivera said it would take some getting used to, however he's optimistic that adopting the cameras will be a change for the better.

"I've been working with the film cameras for many years, so I'll have to adjust to the change," he said. "The digital cameras are much lighter and you get data instantly."

Mr. Fraser said he hopes the demonstration will prove the benefit of using all digital cameras in weapons systems testing.

"Having this camera will please engineers as well as the operators who use the cameras," Mr. Fraser said. "We look toward having good results from this testing and adopting the new camera in the near future."

— Ms. Doris Johnson, AAC Public Affairs

AEDC team members take on Camp Warlord

Seventy-six military members at Arnold Engineering Development Center, Arnold Air Force Base, Tenn., recently took to the road for a deployment to Little Rock Air Force Base, Ark., as part of a two-day training exercise to refresh some of their military skills.

According to Col. David Eichhorn, AEDC commander, Gen. John Jumper, Air Force Chief of Staff, said everyone who wears the blue suit is eligible to deploy. "I wanted to make sure the members of Team AEDC would be ready if and when that call to deploy comes in."

A dual purpose

Col. Steve Johnson, AEDC financial director and deployment planner, said the deployment exercise had two main objectives. "We wanted to emphasize team-building and deployment orientation, and we accomplished that."

The deployment started early on Oct. 23 with a 5 a.m. departure from AEDC aboard buses for the eight-hour ride to Little Rock. As soon as the buses arrived, everyone hit the ground running with actual hands-on scenarios.

The premise of the operation was that members of Team AEDC were helping establish a refugee camp for people fleeing the war-ravaged country of Boranda. The evacuees would need tents to live in as well as immediate medical treatment.

Just as the first tents were finished, wounded evacuees began arriving by the truckload. The team sprang into action providing medical attention they had learned in self-aid and buddy care training.

According to the medical training evaluator who was observing the scenario, the team exceeded all his expectations in the way they responded to the patients, who were volunteers from Little Rock who had been moulaged with realistic-looking serious injuries.

After tearing down the tents and repacking them into crates, the team took a crash-course in identifying unexploded ordnances. Using charts provided by the instructors, members practiced spotting, identifying and reporting the explosive devices they might encounter in a hostile environment.

Then it was on to camouflage netting instruction, where the Camp Warlord residents learned the basics of providing a variety of covers for buildings, vehicles and equipment.

After that, it was time for dinner and chat sessions with some local World War II veterans on hand to share their stories.

A surprise attack

Participants woke early the next morning to the sounds of sirens, bombs exploding and people running and screaming through the compound. Camp Warlord was under a simulated attack, and the team was called on to quickly react to secure the camp and treat wounded.

After the smoke had cleared, members of the Little Rock services squadron served a field breakfast to stoke the fires for the upcoming confidence course. Then, it was back on the buses for a tour of the Little Rock flightline and the inside of the C-130 Hercules.

The final hurdle of the deployment was the warrior challenge confidence course used for training security forces. The 22-obstacle course winding through the back woods of the base proved to be quite a challenge for the team from Arnold.

As the course instructor led the group through the obstacles while explaining how to conquer each one, he stressed teamwork as a way for everyone to finish.

This teamwork was evident as each group of 10-15 people trudged over, under and through the many barriers around the course. In the end, there were quite a few bumps and bruises, but there were many more smiles and handshakes reveling over the accomplishment of finishing the challenge.

Taking charge

Teamwork proved to be the greatest asset in completing the Warrior Challenge. "I noticed great teamwork in the self aid buddy care scenarios, tent raising and obstacle course," Col. Johnson said.

"Leaders emerged at all levels as those with specific expertise took charge," he said.

Following a short breather, the team aligned in formation and stood at attention as Col. Eichhorn reaffirmed the oaths of both the officers and the enlisted members. Later, the group marched back to camp for a quick shower and short flight home aboard a Navy C-9.

"This was a great opportunity for us to train at an operational base that deploys a lot," Col. Eichhorn said. "I am proud of every one of the men and women from AEDC who came along on this trip. This has been a good refresher course on what we all need to know.

"The mission at AEDC is to support the warfighter," he said. "This deployment was designed to remind us of what we're all about, supporting the warfighter and defending America."

— Tech. Sgt. Bob Pullen, AEDC Public Affairs

Resolving workplace disputes faster and cheaper is the goal of the the new AFMC alternative dispute resoution program adopted by the command's partnership council, a union-management team representing more than 42,000 AFMC civilian employees, such as these workers at Tinker AFB, Okla. (Courtesy photo)

AFMC adopts ADR program

Resolving their workplace disputes faster and saving thousands of dollars in each process is what Air Force Materiel Command officials hope a recently-adopted alternative dispute resolution program will do for all AFMC organizations.

ADR allows parties involved in a dispute to voluntarily come together with a mediator and work to a mutually agreeable solution without going through time-consuming and costly legal proceedings, according to Dr. Dan Stewart, AFMC executive director.

An award-winning program

Dr. Stewart and Mr. Scott Blanch, American Federation of Government Employees Council 214 president, co-chair the command's partnership council, a union-management team largely responsible for breathing life into the ADR program. In fact, news of the command's ADR work spread to members of the Society of Federal Labor and Employee Relations Professionals who awarded Mr. Blanch and Mr. Jim Barone, AFMC civilian personnel director, the society's 2002 Labor-Management Cooperation Award. (For more information, see sidebar story in page 25.)

"We're committed to fostering a management-labor culture that thrives on cooperation, teamwork and a 'people first' philosophy, and ADR optimizes that culture," Dr. Stewart said. "ADR is a big part of our partnership effort so we can, together, create and sustain an environment that will take care of our people so they, in turn, can accomplish the AFMC mission."

Mr. Blanch said an adversarial relationship that sometimes exists in traditional dispute resolution methods results in hard feelings on both sides that don't go away when a judge or third party renders their decision. ADR takes some of that away.

"In a formal grievance procedure, everybody digs in. But with ADR, people come together and open the lines of communication to resolve their issues and get on with their lives," Mr. Blanch said. "A lot of times, this method actually improves that working relationship down the road."

A 'win-win' situation

Employing more than half of the total Air Force civil servant population, AFMC accounts for most Air Force workplace disputes — 61 percent in fiscal year 2001, according to Mr. Barone. And knowing people naturally have problems with other people and situations in the workplace, he said it only makes sense to have a program that solves those the fastest, most economic way rather than taking them off the job into the courtroom.

According to a 1998 Air Force Audit Agency study, solving disputes informally using techniques like ADR took on average 45 labor hours and about $2,000 per dispute. Formal resolution took on average 321 hours and more than $16,000 — about eight times the cost.

That's why Mr. Barone said the cost of resolving disputes is measured in hundreds of thousands of dollars, tens of thousands of labor hours, and untold loss of productivity each year.

"It's now beyond dispute that ADR, by emphasizing early resolution using collaborative processes, significantly reduces these costs, and produces better resolutions for both parties," he said. "They retain control over the outcome rather than having a third party simply answer the legal question of who's liable for what, as in traditional adversarial proceedings."

ADR focuses on disputes coming in areas like equal employment opportunity, Merit System Protection Board decisions, negotiated grievance procedures, administrative grievance procedures, unfair labor practice charges, military equal opportunity and treatment and any other potential workplace disputes, according to Ms. Robin Williams, AFMC human resources specialist. In fiscal year 2001, AFMC employees logged 3,280 disputes with 1,353 of those being EEO.

"So you can see that ADR will not only allow our people to resolve their differences quicker which will make them more productive and get them back to work faster, but it will save the Air Force a lot of money," Ms. Williams said. "Improving workplace relationships and partnering with the union are our bottom line, and if we save money in the process, that's a plus for us."

An Air Force first

AFMC's program hinges on a plan three years in the making, requiring every AFMC installation to have an ADR champion and a plan for using ADR in workplace disputes.

To help bases implement ADR, AFMC experts arranged for the Air Force General Counsel to fund ADR design workshops, awareness briefings, senior level management briefings, mediation mentoring services, ADR intermediate training for those who may be qualified and just need to brush up, and basic mediation training, Ms. Williams said.

"The general counsel pays to have mediators trained while actually solving disputes," Ms. Williams said. "This provided more realistic training while solving an actual dispute, all at the same time."

Although ADR is used at various bases around the Air Force, the command is the first to adopt ADR across the full major command organization, said Lt. Col. Marc Van Nuys, Air Force General Counsel dispute resolution division workplace ADR programs division director.

"We wanted AFMC to be the first because of its preeminence in the area of workplace disputes," Col. Van Nuys said. "From our perspective, the AFMC plan will be the template on which other major commands can model their own ADR plans.

"To the extent ADR saves time and money and solves underlying problems and issues giving rise to disputes, it frees up resources to devote to mission accomplishment," he said.

It's working

And Col. Van Nuys said ADR is effective in that an average of more than 75 percent of workplace disputes submitted to ADR are resolved.

"Resolutions generally are more acceptable to both parties, cutting down on post-settlement disputes and appeals as well as repeat complaints," he said.

Both Mr. Barone and Ms. Williams said AFMC's ADR program would not exist if it wasn't for the recently-established partnership council where members from labor and management work together for the good of the mission.

"The union is a full partner in designing local ADR plans, appointing mediators and other neutrals, and reviewing settlements to make sure everything complies with collective bargaining agreements," said Mr. Barone, AFMC ADR champion. "In short, the plan's vision is to make ADR a part of AFMC's operational mission to free the workforce to perform its primary mission: to sustain the Air Force's national defense obligations through weapons system acquisition and logistical support."

For more information on any of the ADR training tools, call Ms. Williams at DSN 787-5607 or contact your base ADR champion.

— Tech Sgt. Carl Norman, AFMC Public Affairs

AFMC duo honored for partnership accomplishments

Turning chaos and distrust into true partnership and single-mindedness earned two command members the Society of Federal Labor and Employee Relations Professionals 2002 Labor Management Cooperation award.

Mr. Jim Barone, Air Force Materiel Command personnel director, and Mr. Scott Blanch, American Federation of Government Employees Council 214 president, earned their awards for spearheading a labor-management partnership council cited for turning an adversarial labor-management relationship into one focused on cooperation and mission accomplishment, said Lt. Col. Marc Van Nuys, director of ADR programs for workplace disputes for the AFGE's Council office at the Pentagon. The duo received their awards during a luncheon at the society's 29th Annual Symposium at the Hilton Crystal City Hotel in Arlington, Va.

The main initiative partnership council members birthed is the recently-approved alternative dispute resolution program being implemented command-wide. This allows parties disputing workplace issues to voluntarily work with a mediator to a mutually agreeable solution without going through time-consuming and costly legal proceedings, Col. Van Nuys said.

This ADR program is the first such command-wide initiative in the Air Force and one Pentagon officials said will "be the template on which other major commands can model their own ADR plans."

"AFMC's alternative dispute resolution plan is as good an example of partnership as I've ever seen," said Col. Van Nuys, whose office submitted Mr. Barone and Mr. Blanch for the award. "Only four years ago the command's labor and management couldn't agree on whether or not the sun was shining and they came to their 1998 master labor agreement only because the federal labor relations authorities made them — six years later.

"Now, labor and management work together. They worked and approved their new master labor agreement in a matter of weeks versus years and now they're implementing ADR. That's a paradigm shift," he continued.

In his day-to-day role, Mr. Barone sets and implements military and civilian personnel policies affecting the command's nearly 80,000 military and civilian personnel. As AFGE Council 214 president, Mr. Blanch represents a diverse workforce from aircraft mechanics to white-collar employees. AFGE Council 214 represents approximately 42,000 AFMC civilian employees. Its bargaining unit is the largest in the Air Force and one of the largest in the entire federal government.

Mr. Barone and Mr. Blanch's work with the partnership council started in 1999 as the command's workforce was traveling down what Mr. Barone called a rocky road littered with unfair labor practice charges by both sides, trips to the Federal Service Impasses Panel and finally direct intervention by the General Counsel of the Federal Labor Relations Authority.

"Historically, AFMC and Council 214 had a contentious, acrimonious relationship," Mr. Barone said. "But in 1999, management and union officials decided that the current counterproductive adversarial relationship needed to change and focus more on partnering in deed as well as name."

At their first meeting in January 2000, council members charted a series of initiatives designed to promote cooperation between management and labor — ADR topped the agenda, he said. And after overcoming many challenges like an entrenched determination to use litigation as the primary dispute resolution method and working through the tragic events of Sept. 11, 2001, command officials approved the ADR process for the entire command.

Now that the ADR plan is finalized, Mr. Barone said that work will not stop. In fact, he said, "Our vision is to make ADR a part of AFMC's operational mission by resolving disputes at the lowest level possible, as early as possible, and as inexpensively as possible, in order to free the workforce to perform its primary mission: to sustain the Air Force's national defense obligations through weapons system acquisition and logistical support."

— Tech Sgt. Carl Norman, AFMC Public Affairs

Officer Down Under

An Edwards Air Force Base, Calif., medical officer recently returned from the 2002 Nike World Masters Games in Melbourne, Australia, with three medals for track events.

1st Lt. George Onyenyeonwu, 95th Medical Group development director, returned from the land Down Under Monday with a gold medal in the 4x100-meter relay race and took the bronze in the 100- and 200-meter dashes.

"I had a blast in Australia," Lt. Onyenyeonwu said. "The whole city and experience was wonderful."

The preliminary matches began Oct. 6, he said.

Enriching experience

An experience like Australia is fun, according to Lt. Onyenyeonwu. "A person in my situation must go out and represent the Air Force as best they can and not forget what they are sent to do," he said.

Lt. Onyenyeonwu said running track for the Air Force and his overall experience at the games was good.

"My favorite part was the opening ceremony when all of the athletes participated in the torch lighting ceremony."

Although a trip to Australia is fascinating, according to Lt. Onyenyeonwu, a person must not forget the people that are left behind and the people who make events like the World Games possible.

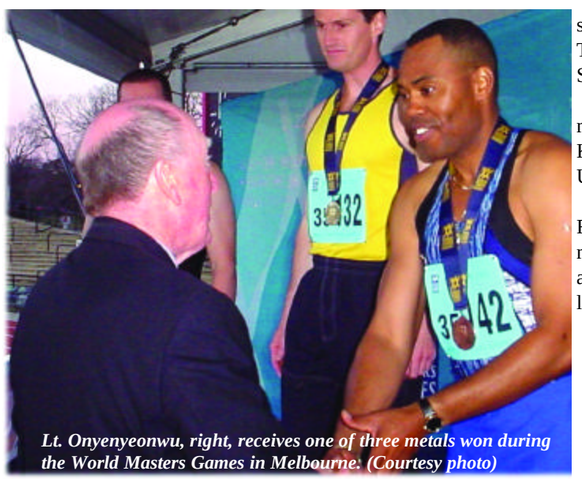
"I really want to thank all my colleagues in the medical group who stepped up and did the work while I was away competing for the Air Force," he said.

Setting goals and staying focused

Lt. Onyenyeonwu recommends that any athlete on any level focus on his or her goals and not lose sight of the ultimate prize.

"A person also has to stay highly motivated on the inside," said Lt. Onyenyeonwu. "When you set realistic goals, you can achieve anything."

— Airman 1st Class Matthew Dillier, AFFTC Public Affairs



Lt. Onyenyeonwu, right, receives one of three metals won during the World Masters Games in Melbourne. (Courtesy photo)

Maj. Kenneth Holliday, right, and 1st Lt. Joe Kennedy of the Air Force Rugby Team. (Courtesy photo)

Hanscom rugby players dominate

Maj. Kenneth Holliday, 66th Security Forces Squadron commander, and 1st Lt. Joe Kennedy, a program manager in the Military Satellite Communication Terminals Program office, Hanscom Air Force Base, Mass. recently assisted the Air Force Rugby Team in winning during the annual Armed Forces Rugby Championship held Oct. 9-11 at Fort Leonard Wood, Mo.

The team not only gave an award-winning performance during the five games played against the other services, but dominated the tournament. According to Maj. Holliday, the Air Force's explosive offense and stifling defense led the Air Force team to outscore its opponents 187 to 36.

"The championship win capped off a long and rewarding 2002 year of rugby for the Air Force team," said Lt. Col. Larry Grant, director and head coach of Air Force Rugby.

This year, the team placed third at the St. Louis, Mo., Ruggerfest, held in April, and fifth at the Aspen, Colo., Ruggerfest, held in September.

Maj. Holliday and Lt. Kennedy credit physical and mental preparation, along with many hours of practice, as helping them and the rest of the team perform well at the Armed Forces Rugby Championship.

At the competition, Lt. Kennedy distinguished himself by earning selection to the All-Tournament First Team and to the Armed Forces Team. He has also been selected to compete in the U.S. National All Star Championships, to be held in December in Florida.

"We placed nine players on that team, which goes to show how many good players we are lucky to have on our side," said Lt. Kennedy. The NASC is also the primary vehicle for selection to the U.S. National Rugby Team, known as the U.S. Eagles.

Rugby is an official Armed Forces varsity sport. Although the Air Force team is comprised of players stationed all over the world and meets only twice a year for competition, the team is quickly becoming a dominant force on the national scene, according to Maj. Holliday. To learn more about Air Force rugby, go to http://www.usafrugby.com.

— 2nd Lt. Stacie Shafran, ESC Public Affairs

AFCEE athlete earns bronze medal in U.S. Transplant Games

Initially, Ms. Sarah Davis only wanted to improve her quality of life when she was placed on a waiting list for an organ transplant. Now, this kidney transplant survivor is thriving in a new life as a nationally recognized athlete.

The journey to health and athletic achievement has been arduous for this Air Force Center for Environmental Excellence procurement clerk at Brooks City-Base, Texas, who once had trouble catching her breath. In June, however, U.S. Transplant Games athletes had trouble catching her in the shot put event in which she won the bronze medal.

"Both my kidneys were failing," she recalls about her 1985 diagnosis that truly changed her life. "I had flu-like symptoms, but didn't know what it was. In the middle of summer I'd turn up the heater in my car. I felt like a truck had hit me."

It came as a shock

This San Antonio native had no family history of kidney failure when she was diagnosed with glomerulonephritis, an inflammation of the membrane tissue in the kidneys that filters and separates wastes and extra fluid from the blood. At the time of her diagnosis, only 10 percent of her kidneys were functioning.

As a consequence, she was easily fatigued. She avoided close contact with people because of her unsavory, ammonia-smelling body odor caused by her kidneys' inability to filter toxins. Her prognosis was grim while she went on dialysis awaiting an organ donor.

Ms. Davis underwent a kidney transplant in 1986. Then the real ordeal began. She was placed on anti-rejection medication, noting, "The body can reject the transplanted organ anytime." She also took steroids to reduce her vulnerability to pain. "I also developed diabetes and high blood pressure after the transplant."

Opportunity came knocking

While her post-transplant health improved, she was in no condition to consider athletics as a pastime. "I never played sports in school. However I did play trumpet in the marching band."

The National Kidney Foundation's inauguration of the U.S. Transplant Games in 1990 proved fateful for Ms. Davis, who at the time was a Texas Kidney Foundation volunteer. The former director of that organization asked her if she was interested in competing, which elicited her tacit reply, "What would I do: Play the trumpet?"

The Texas Kidney Foundation paid for her trip to the first U.S. Transplant Games held at Purdue University in Indiana. "I competed in what I though were easy events: speed walking and softball throw," she said.

Olympic Games track and field gold medalist Mr. Carl Lewis was the athletic venue's host. "Mr. Lewis was surprised by the speed of the athletes. I was surprised by my competition. They were out there to win."

Unprepared, she did not place in either event. Speed walking was particularly brutal for her. "We had to walk around a one-and-a-half mile oval track. My calves were throbbing." Aside from her poor pe formance, she was, nonetheless, inspired by fellow athletes' competi tiveness and determination in such physically demanding events as cycling, swimming and the long jump.

A triumphal return

She did not compete in the games again until this year. "I had a very ambitious plan to compete in four events," she said, referring to the shot put, softball throw, volleyball and swimming. Her son Rickey, high school track and field star, trained his mother in the shot put th requires tossing an eight-and-a-half pound sphere.

The 1,500 athletes who competed in the 2002 games in Orlando, Fla., were stunned by her bronze medal-winning shot put throw of 18.05 feet. However, her biggest thrill there involved meeting fellow kidney transplant survivor Mr. Sean Elliott. The former San Antonio Spur, who had received a kidney from his brother in 1999, made spo history as the first transplant athlete to resume his career.

So grateful is Ms. Davis for her good fortune that she plans to sh her appreciation to their donor's family. "I'm going to give my med to them. Because of them, I was able to see my son grow up." Ms. Davis is alive thanks to the donated kidney from a 17-year-old boy died in 1986.

— Mr. Rudy Purificato, 311th HSW

Ms. Sarah Davis displays the bronze medal she won in the shot put event at the U.S. Transplant Games held last June in Orlando, Fla. (Photo by Mr. Rudy Purificato, 311th HSW)

Dyess team takes top crown in Air Force readiness competition

EGLIN AIR FORCE BASE, Fla. — Experts from Dyess AFB, Texas, outscored 36 teams from around the globe recently to take top honors in the annual Air Force Supply — Fuels Readiness Competition.

The three-day competition, also known as "roadeo," pits supply and fuels specialists in competition categories ranging from M-16 firing to cargo pallet buildup.

The team from host Eglin Air Force Base, Fla., took the overall trophy in the competition's supply side while experts from Shepherd AFB, Texas, took it all on the fuels side of the house.

The roadeo started in the late 1980s since there was no competition for the logistics career field, said Master Sgt. Kenn Lett, event coordinator. It's grown each year, and he said more than 295 competitors appreciated the opportunities available this year.

Among the competition's events was a 6,000-gallon refueler backing up, tire changing on the same refueler and driving a forklift through a slalom course.

And while the title was up in the air until the last event, Sgt. Lett said recognizing the contributions logistics people make is what the competition is all about.

"We're not flashy, we're behind the lines doing the grunt work," he said. "But the Air Force can't fly and fight without logistics."

— Reported by AAC Public Affairs

Left: Staff Sgt. Othman, 96th Logistics Readiness Squadron at Eglin AFB, Fla., drives a forklift through a slalom course at the recent Air Force Supply-Fuels Readiness Competition.

AFRL scientists named 2002 ASME Fellows

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — Two Air Force Research Laboratory scientists were recently named American Society of Mechanical Engineers Fellows for 2002.

Dr. Ajit Roy, materials and manufacturing directorate, was recognized for more than 20 years of groundbreaking research in developing advanced analytical modeling and test methods for organic matrix composite materials. He is responsible for conducting and managing basic research on the mechanics of composite materials as a researcher in the structural material branch.

Dr. William Roquemore, propulsion directorate, was recognized for his achievements in the engineering profession as senior research scientist in the field of air-breathing combustion, diagnostics and fuels technologies.

Fellows are the highest elected grade of membership within ASME, the attainment of which recognizes exceptional engineering achievements and contributions to the engineering profession.

— Reported by AFRL Public Affairs

SSG earns Excellence in Partnership Award

MAXWELL AIR FORCE BASE, GUNTER ANNEX, Ala. — Standard Systems Group's Commercial Information Technology-Product Information Directorate recently earned the Govermant Service Agency Loyal User Award in the 2002 Excellence in Partnership Award customer agency category.

Excellence in Partnership Awards are sponsored by the Government Service Agency Federal Supply Schedules, the Coalition for Government Procurement and The Federal Times. The loyal user award is given to the federal operation that has remained a steadfast supporter of the schedules program over the years.

The directorate's blanket purchase agreements effectively use the government service agency schedule to closely mirror commercial buying practices. They provide customers with state-of-the-art; high-quality commercial services and products at volume discount pricing on a direct delivery basis.

— Reported by SSG Public Affairs

F-15 Wing shop, GPS teams take AF honors

ROBINS AIR FORCE BASE, Ga. — Two of five 2002 Air Force Chief of Staff Team Excellence Awards went to Robins members as they saved time, improved efficiency and reduced Air Force financial output by $66 million.

Members of Robins' F-15 Wing Shop Lean Depot Repair and Global Positioning System User Equipment Diminishing Manufacturing Sources and Materiel Shortages teams received the awards recognizing outstanding team performance and promoting systematic process improvement, according to Air Force officials. They also serve as a means to share best practices and promote mission improvement and cost savings throughout the Air Force.

Air Force Chief of Staff Gen. John Jumper announced the award winners at the Air Force Association convention Sept. 17.

F-15 Wing Shop Lean Depot Repair Team members are credited with developing a 16-step process to reduce the cost of overhauling and repairing F-15 Eagle wings, while at the same time improving the efficiency of their work schedules.

Global Positioning System User Equipment Diminishing Manufacturing Sources and Materiel Shortages Team members are credited for reducing parts from becoming obsolete that were essential for receiving and processing GPS signals to weapon system platforms. These platforms included aircraft, tanks, ships, hand held units and precision-guided munitions.

The GPS user equipment team helped ensure the readiness and availability of 225 different joint platforms and affirmed GPS as the nation's premier system for precision navigation and targeting. This team was also identified as an Air Force Best practices.

— Reported by WR-ALC Public Affairs

AFRL presented with Small Business Award

WRIGHT-PATTERSON AIR FORCE BASE, Ohio —The Air Force Research Laboratory was presented with a Secretary of the Air Force Small and Disadvantaged Business Excellence Award in a ceremony held recently at the Pentagon.

Ms. Pat Deschaine, AFRL director of Small Business, accepted the award which was presented by Undersecretary of the Air Force Mr. Peter Teets and Mr. Joseph Diamond, Air Force Director of Small Business.

AFRL received this award for its continued efforts to award program dollars to small businesses throughout fiscal year 2001, when 43.4 percent of AFRL's program dollars went to small businesses. This represented an increase of more than one percent from the previous year.

— Reported by AFRL Public Affairs

Edwards wins Air Force Civil Engineering award

EDWARDS AIR FORCE BASE, Calif. — Air Force Chief of Staff General John Jumper presented the 95th Civil Engineering Group Energy Team with the Chief of Staff Team Excellence Award for implementing energy conservation measures saving more than $42 million over a five-year period.

Edwards was one of five teams chosen to receive this honor, which recognizes outstanding team performance and shares best practices within the Air Force.

As of the first quarter in fiscal year 2001, Edwards was nearly last in the command for meeting energy reduction goals.

Within one year, several reduction initiatives were implemented, including: the advance metering information communication and operating system, a measuring system that monitors peak power demands, enabling CE to manage loads and anticipate shortages; participation in the California 20/20 Rebate Program; water conservation; Green Power; and heating, ventilation and air conditioning automation. These initiatives are expected to save more than $42 million over a five-year period.

— Reported by AFFTC Public Affairs

AFIT honors this year's distinguished alumni

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — The Air Force Institute of Technology recently honored four 2002 Distinguished Alumni selected for their pioneering roles in science, engineering, and education.

Retired Maj. Gen. Donald Lamberson was recognized for his many contributions to the Air Force and Defense Department in the area of directed energy. Respected by many across the Air Force as the "father" of high-energy laser weapons, he has most recently agreed to serve as the chair of the Distinguished Review Board for the new AFIT Center for Directed Energy.

Retired Brig. Gen. Daniel Daley was recognized for his leadership in the development of strong academic curricula that led to the accreditation and the granting of Bachelor of Science and Master of Science degrees at AFIT in 1956. He served as a faculty member of both AFIT and the US Air Force Academy, and co-authored the textbook, "Aircraft Engine Design."

Dr. Guion S. "Guy" Bluford, a retired colonel, was recognized for his role as an aerospace engineer and an astronaut. As the first African American to fly in space, he has been a NASA mission specialist or payload commander on four Space Shuttle missions.

Mr. George W. S. Abbey was recognized for his significant contributions to space research. He joined NASA in 1964 as an Air Force captain assigned to the Apollo Program, and has has served in various positions including Johnson Space Center director. He is currently senior assistant for International Issues to NASA Administrator, the Honorable Sean O'Keefe.

AFIT selected its first distinguished alumni in 1979. At that time Col. Frank Borman, Gen. Jimmy Doolittle, Col. George Holloman, and Gen. Bernard Schriever were given the prestigious honor. Since that date, only 16 others have been selected.

The distinguished alumni were each presented with a medallion by retired Maj. Gen. Peter Odgers, chairman of the AFIT Foundation.

— Reported by AFIT Public Affairs